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Sequence Listing could not be accepted due to errors.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Durreshwar Anjum

Timestamp: [year=2008; month=5; day=30; hr=12; min=17; sec=48; ms=565; ]

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\*\*\*\*\*

Reviewer Comments:

<210> 30

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 30

gcttatggcg cgccctcagga ctggagcttg ctccgc

36n

21

Please delete the extra n which appears beside the total number of bases 36 and also remove the end of file text which is below the bases(21) as shown in the attachment above.

\*\*\*\*\*

Application No: 10590956 Version No: 1.0

**Input Set:**

**Output Set:**

**Started:** 2008-05-09 16:08:23.466  
**Finished:** 2008-05-09 16:08:25.990  
**Elapsed:** 0 hr(s) 0 min(s) 2 sec(s) 524 ms  
**Total Warnings:** 24  
**Total Errors:** 7  
**No. of SeqIDs Defined:** 30  
**Actual SeqID Count:** 30

Error code	Error Description
W 402	Undefined organism found in <213> in SEQ ID (1)
W 402	Undefined organism found in <213> in SEQ ID (2)
W 402	Undefined organism found in <213> in SEQ ID (3)
W 402	Undefined organism found in <213> in SEQ ID (4)
W 402	Undefined organism found in <213> in SEQ ID (5)
W 402	Undefined organism found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 402	Undefined organism found in <213> in SEQ ID (20)
W 213	Artificial or Unknown found in <213> in SEQ ID (21)
W 213	Artificial or Unknown found in <213> in SEQ ID (22)
W 213	Artificial or Unknown found in <213> in SEQ ID (23)
W 213	Artificial or Unknown found in <213> in SEQ ID (24)
W 213	Artificial or Unknown found in <213> in SEQ ID (25)
W 213	Artificial or Unknown found in <213> in SEQ ID (26)

**Input Set:**

**Output Set:**

**Started:** 2008-05-09 16:08:23.466  
**Finished:** 2008-05-09 16:08:25.990  
**Elapsed:** 0 hr(s) 0 min(s) 2 sec(s) 524 ms  
**Total Warnings:** 24  
**Total Errors:** 7  
**No. of SeqIDs Defined:** 30  
**Actual SeqID Count:** 30

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (27)
W 213	Artificial or Unknown found in <213> in SEQ ID (28)
W 213	Artificial or Unknown found in <213> in SEQ ID (29)
W 213	Artificial or Unknown found in <213> in SEQ ID (30)
E 342	'n' position not defined found at POS: 39 SEQID(30)
E 254	The total number of bases conflicts with running total Input: 0, Calculated : 39 SEQID(30)
E 323	Invalid/missing amino acid numbering SEQID (30)at Protein (1)
E 323	Invalid/missing amino acid numbering SEQID (30) POS (1)
E 323	Invalid/missing amino acid numbering SEQID (30)at Protein (5)
E 323	Invalid/missing amino acid numbering SEQID (30)at Protein (10)
E 253	The number of bases differs from <211> Input: 36 Calculated:39

## SEQUENCE LISTING

<110> Genencor International, Inc.  
Bower, Benjamin  
Mitchinson, Colin  
Larenas, Edmund

<120> Cellulase Fusion Protein and Heterologous Cellulase Fusion Construct Encoding the Same

<130> GC832-PCT

<140> 10590956  
<141> 2008-05-09

<150> PCT/US2005/010242  
<151> 2005-03-25

<150> US 60/556,711  
<151> 2004-03-25

<160> 30

<170> PatentIn version 3.2

<210> 1  
<211> 1570  
<212> DNA  
<213> Trichoderma reesei

<400> 1

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acttgcactc	aacagacagg	ctccgtggtc	atcgacgcca	actggcgctg	gactcacgt	180
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cgtagctctc	tacttcgtgt	ccatggacgc	ggatgggtgc	gtgagcaagt	atcccaccaa	600
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gttcatcaat	ggccagggcc	acgttgaggg	ctgggagccg	tcatccaaca	acgcaaacac	720
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cgacttggAAC	ccataccggcc	tggcaacac	cagcttctac	ggccctggct	caagctttac	960
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catcaagttc	ggaccattg	gcagcaccgg	caacccttagc	ggcggcaacc	ctcccgccgg	1500
aaacccggcct	ggcaccacca	ccacccggcc	cccagccact	accactggaa	gtctcccg	1560

acctactagt 1570

<210> 2

<211> 51

<212> DNA

<213> Trichoderma reesei

<400> 2

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<210> 3

<211> 1438

<212> DNA

<213> Trichoderma reesei

<400> 3

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actcacgcta cgaacacgag cacgaactgc tacgatggca acacttggag ctgcacccta 180  
tgtcctgaca acgagacctg cgcaagaac tgctgtctgg acggtgccgc ctacgcgtcc 240  
acgtacggag ttaccacgag cggtAACAGC ctctccattg gctttgtcac ccagtctgca 300  
cagaagaacg ttggcgctcg cctttacctt atggcgagcg acacgaccta ccaggaattc 360  
accctgtttt gcaacgagtt ctcttcgtat gttgatgttt cgcaagctgcc gtaagtgact 420  
taccatgaac ccctgacgta tttttgtt ggctccacgc tgactggcca atttaaggtg 480  
cggcttgaac ggagctctt acttcgtgtc catggacgag gatggggcg tgagcaagta 540  
tccccaccaac accgctggcg ccaagtacgg cacggggta ttttttttttccatccatc 600  
cgatctgaag ttcatcaatg gccaggccaa cggtggggc tgggagccgt catccaacaa 660  
cgccaaacacg ggcatggag gacacggaaatg ctgctgtctt gagatggata tctggggaggc 720  
caactccatc tccgaggctc ttacccccc cccttgcacg actgtcgcc aggagatctg 780  
cgagggttat ggggtggcg gaacttactc cgataacaga tatggcgca ctgcgtatcc 840  
cgatggctgc gacttggacc cataccgcctt gggcaacacc agtttctacg gcccggctc 900  
aagctttacc ctgcatacca ccaagaaattt gaccgtgtc acccagttcg agacgtcg 960  
tgccatcaac cgatactatg tccagaatgg cgtcaacttc cagcagccca acgcccagct 1020  
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ttgacaaaaga gtcaaggcgc tgactgagat gttacagttac tacgccaaca tgctgtggct 1260  
ggactccacc taccggacaa acggagacccctt ctccacaccc ggtggccgtgc gcggaaagctg 1320  
ctccaccacg tccgggtgtcc ctgctcaggat cgaatcttagt tctcccaacg ccaagggtcac 1380  
cttctccaaac atcaagttcg gacccattgg cagcaccggc aaccctagcg gcggcaac 1438

<210> 4

<211> 81

<212> DNA

<213> Trichoderma reesei

<400> 4

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agctctcccg gacctactag t 81

<210> 5

<211> 480

<212> PRT

<213> Trichoderma reesei

<400> 5

Met Tyr Arg Lys Leu Ala Val Ile Ser Ala Phe Leu Ala Thr Ala Arg  
1 5 10 15  
Ala Gln Ser Ala Cys Thr Leu Gln Ser Glu Thr His Pro Pro Leu Thr  
20 25 30  
Trp Gln Lys Cys Ser Ser Gly Gly Thr Cys Thr Gln Gln Thr Gly Ser  
35 40 45  
Val Val Ile Asp Ala Asn Trp Arg Trp Thr His Ala Thr Asn Ser Ser  
50 55 60  
Thr Asn Cys Tyr Asp Gly Asn Thr Trp Ser Ser Thr Leu Cys Pro Asp  
65 70 75 80  
Asn Glu Thr Cys Ala Lys Asn Cys Cys Leu Asp Gly Ala Ala Tyr Ala  
85 90 95  
Ser Thr Tyr Gly Val Thr Thr Ser Gly Asn Ser Leu Ser Ile Gly Phe  
100 105 110  
Val Thr Gln Ser Ala Gln Lys Asn Val Gly Ala Arg Leu Tyr Leu Met  
115 120 125  
Ala Ser Asp Thr Thr Tyr Gln Glu Phe Thr Leu Leu Gly Asn Glu Phe  
130 135 140  
Ser Phe Asp Val Asp Val Ser Gln Leu Pro Cys Gly Leu Asn Gly Ala  
145 150 155 160  
Leu Tyr Phe Val Ser Met Asp Ala Asp Gly Gly Val Ser Lys Tyr Pro  
165 170 175  
Thr Asn Thr Ala Gly Ala Lys Tyr Gly Thr Gly Tyr Cys Asp Ser Gln  
180 185 190  
Cys Pro Arg Asp Leu Lys Phe Ile Asn Gly Gln Ala Asn Val Glu Gly  
195 200 205  
Trp Glu Pro Ser Ser Asn Asn Ala Asn Thr Gly Ile Gly Gly His Gly  
210 215 220  
Ser Cys Cys Ser Glu Met Asp Ile Trp Glu Ala Asn Ser Ile Ser Glu  
225 230 235 240  
Ala Leu Thr Pro His Pro Cys Thr Thr Val Gly Gln Glu Ile Cys Glu  
245 250 255  
Gly Asp Gly Cys Gly Gly Thr Tyr Ser Asp Asn Arg Tyr Gly Gly Thr  
260 265 270  
Cys Asp Pro Asp Gly Cys Asp Trp Asn Pro Tyr Arg Leu Gly Asn Thr  
275 280 285  
Ser Phe Tyr Gly Pro Gly Ser Ser Phe Thr Leu Asp Thr Thr Lys Lys  
290 295 300  
Leu Thr Val Val Thr Gln Phe Glu Thr Ser Gly Ala Ile Asn Arg Tyr  
305 310 315 320  
Tyr Val Gln Asn Gly Val Thr Phe Gln Gln Pro Asn Ala Glu Leu Gly  
325 330 335  
Ser Tyr Ser Gly Asn Glu Leu Asn Asp Asp Tyr Cys Thr Ala Glu Glu  
340 345 350  
Ala Glu Phe Gly Gly Ser Ser Phe Ser Asp Lys Gly Leu Thr Gln  
355 360 365  
Phe Lys Lys Ala Thr Ser Gly Gly Met Val Leu Val Met Ser Leu Trp  
370 375 380  
Asp Asp Tyr Tyr Ala Asn Met Leu Trp Leu Asp Ser Thr Tyr Pro Thr  
385 390 395 400  
Asn Glu Thr Ser Ser Thr Pro Gly Ala Val Arg Gly Ser Cys Ser Thr  
405 410 415  
Ser Ser Gly Val Pro Ala Gln Val Glu Ser Gln Ser Pro Asn Ala Lys  
420 425 430  
Val Thr Phe Ser Asn Ile Lys Phe Gly Pro Ile Gly Ser Thr Gly Asn  
435 440 445  
Pro Ser Gly Gly Asn Pro Pro Gly Gly Asn Pro Pro Gly Thr Thr Thr

450 455 460  
Thr Arg Arg Pro Ala Thr Thr Thr Gly Ser Ser Pro Gly Pro Thr Ser  
465 470 475 480  
  
<210> 6  
<211> 431  
<212> PRT  
<213> Trichoderma reesei  
  
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20 25 30  
Val Ile Asp Ala Asn Trp Arg Trp Thr His Ala Thr Asn Ser Ser Thr  
35 40 45  
Asn Cys Tyr Asp Gly Asn Thr Trp Ser Ser Thr Leu Cys Pro Asp Asn  
50 55 60  
Glu Thr Cys Ala Lys Asn Cys Cys Leu Asp Gly Ala Ala Tyr Ala Ser  
65 70 75 80  
Thr Tyr Gly Val Thr Thr Ser Gly Asn Ser Leu Ser Ile Gly Phe Val  
85 90 95  
Thr Gln Ser Ala Gln Lys Asn Val Gly Ala Arg Leu Tyr Leu Met Ala  
100 105 110  
Ser Asp Thr Thr Tyr Gln Glu Phe Thr Leu Leu Gly Asn Glu Phe Ser  
115 120 125  
Phe Asp Val Asp Val Ser Gln Leu Pro Cys Gly Leu Asn Gly Ala Leu  
130 135 140  
Tyr Phe Val Ser Met Asp Ala Asp Gly Gly Val Ser Lys Tyr Pro Thr  
145 150 155 160  
Asn Thr Ala Gly Ala Lys Tyr Gly Thr Gly Tyr Cys Asp Ser Gln Cys  
165 170 175  
Pro Arg Asp Leu Lys Phe Ile Asn Gly Gln Ala Asn Val Glu Gly Trp  
180 185 190  
Glu Pro Ser Ser Asn Asn Ala Asn Thr Gly Ile Gly Gly His Gly Ser  
195 200 205  
Cys Cys Ser Glu Met Asp Ile Trp Glu Ala Asn Ser Ile Ser Glu Ala  
210 215 220  
Leu Thr Pro His Pro Cys Thr Thr Val Gly Gln Glu Ile Cys Glu Gly  
225 230 235 240  
Asp Gly Cys Gly Gly Thr Tyr Ser Asp Asn Arg Tyr Gly Gly Thr Cys  
245 250 255  
Asp Pro Asp Gly Cys Asp Trp Asn Pro Tyr Arg Leu Gly Asn Thr Ser  
260 265 270  
Phe Tyr Gly Pro Gly Ser Ser Phe Thr Leu Asp Thr Thr Lys Lys Leu  
275 280 285  
Thr Val Val Thr Gln Phe Glu Thr Ser Gly Ala Ile Asn Arg Tyr Tyr  
290 295 300  
Val Gln Asn Gly Val Thr Phe Gln Gln Pro Asn Ala Glu Leu Gly Ser  
305 310 315 320  
Tyr Ser Gly Asn Glu Leu Asn Asp Asp Tyr Cys Thr Ala Glu Glu Ala  
325 330 335  
Glu Phe Gly Gly Ser Ser Phe Ser Asp Lys Gly Gly Leu Thr Gln Phe  
340 345 350  
Lys Lys Ala Thr Ser Gly Gly Met Val Leu Val Met Ser Leu Trp Asp  
355 360 365  
Asp Tyr Tyr Ala Asn Met Leu Trp Leu Asp Ser Thr Tyr Pro Thr Asn

370	375	380
Glu	Thr Ser Ser Thr Pro Gly Ala Val Arg Gly Ser Cys Ser Thr Ser	
385	390	395
Ser	Gly Val Pro Ala Gln Val Glu Ser Gln Ser Pro Asn Ala Lys Val	
405	410	415
Thr Phe Ser Asn Ile Lys Phe Gly Pro Ile Gly Ser Thr Gly Asn		
420	425	430

<210> 7  
<211> 1077  
<212> DNA  
<213> Acidothermus cellulolyticus

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ctctggtcac gcgactaccg cagcatgctc gaccagataa agtcgctcg	180
atccggctgc cgtactctga cgacattctc aagccggca ccatgcccga cagcatcaat	240
tttttaccaga tgaatcagga cctgcagggt ctgacgtcct tgcaaggatcat ggacaaaatc	300
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gcccggcggc gggccggaaa cggcgtgtc tggtaatc cgaacctgtc catttcgtc	600
gaagggtgtgc agagctacaa cggagactcc tactgggtggg gcccgaacct gcaaggagcc	660
ggccagtgacc cggctgtgtc gaacgtgccc aaccgcctgg tgtactcgcc gcacgactac	720
ccgacgagcgt tctacccgca gacgtgggtc agcgatccga cttccccaa caacatgccc	780
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cagtacctac ggccgaccgc gcaatacggt gcccggacat tccagtggac cttctggcc	960
tggaaacccccc attccggcga cacaggagga attctcaagg atgactggca gacggtcgac	1020
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<210> 8  
<211> 359  
<212> PRT  
<213> Acidothermus cellulolyticus

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Thr Cys Asn Tyr Val Val His Gly Leu Trp Ser Arg Asp Tyr Arg Ser			
35	40	45	
Met Leu Asp Gln Ile Lys Ser Leu Gly Tyr Asn Thr Ile Arg Leu Pro			
50	55	60	
Tyr Ser Asp Asp Ile Leu Lys Pro Gly Thr Met Pro Asn Ser Ile Asn			
65	70	75	80
Phe Tyr Gln Met Asn Gln Asp Leu Gln Gly Leu Thr Ser Leu Gln Val			
85	90	95	
Met Asp Lys Ile Val Ala Tyr Ala Gly Gln Ile Gly Leu Arg Ile Ile			
100	105	110	
Leu Asp Arg His Arg Pro Asp Cys Ser Gly Gln Ser Ala Leu Trp Tyr			
115	120	125	
Thr Ser Ser Val Ser Glu Ala Thr Trp Ile Ser Asp Leu Gln Ala Leu			
130	135	140	

Ala Gln Arg Tyr Lys Gly Asn Pro Thr Val Val Gly Phe Asp Leu His  
 145 150 155 160  
 Asn Glu Pro His Asp Pro Ala Cys Trp Gly Cys Gly Asp Pro Ser Ile  
 165 170 175  
 Asp Trp Arg Leu Ala Ala Glu Arg Ala Gly Asn Ala Val Leu Ser Val  
 180 185 190  
 Asn Pro Asn Leu Leu Ile Phe Val Glu Gly Val Gln Ser Tyr Asn Gly  
 195 200 205  
 Asp Ser Tyr Trp Trp Gly Gly Asn Leu Gln Gly Ala Gly Gln Tyr Pro  
 210 215 220  
 Val Val Leu Asn Val Pro Asn Arg Leu Val Tyr Ser Ala His Asp Tyr  
 225 230 235 240  
 Ala Thr Ser Val Tyr Pro Gln Thr Trp Phe Ser Asp Pro Thr Phe Pro  
 245 250 255  
 Asn Asn Met Pro Gly Ile Trp Asn Lys Asn Trp Gly Tyr Leu Phe Asn  
 260 265 270  
 Gln Asn Ile Ala Pro Val Trp Leu Gly Glu Phe Gly Thr Thr Leu Gln  
 275 280 285  
 Ser Thr Thr Asp Gln Thr Trp Leu Lys Thr Leu Val Gln Tyr Leu Arg  
 290 295 300  
 Pro Thr Ala Gln Tyr Gly Ala Asp Ser Phe Gln Trp Thr Phe Trp Ser  
 305 310 315 320  
 Trp Asn Pro Asp Ser Gly Asp Thr Gly Gly Ile Leu Lys Asp Asp Trp  
 325 330 335  
 Gln Thr Val Asp Thr Val Lys Asp Gly Tyr Leu Ala Pro Ile Lys Ser  
 340 345 350  
 Ser Ile Phe Asp Pro Val Gly  
 355

<210> 9  
 <211> 1914  
 <212> DNA  
 <213> Acidothermus cellulolyticus

<400> 9  
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 ccggactacg ggcacgagac aacctcgag gcgtacagct tctggctctg gctcgaagcg 180  
 acgtacggcg cagtgaccgg caactggacg ccgttcaaca acgcctggac gacgatggaa 240  
 acgtacatga tcccgcagca cgccggaccag ccgaacaacg cgtcgtacaa ccccaacacg 300  
 ccggcgttgt acgtccggaa agagccgtg cccagcatgt acccggttgc catcgacacg 360  
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 cccggcgggt gttgcaact cggtccttc gctaaggccg tctcctacat caacacattc 540  
 cagcgcggct cgcaggagtc cgtctggag acggtcaccc agccgacgtg cgacaacggc 600  
 aagtacggtg gggcgcacgg ctacgtcgac ctgttcatcc agggttcgac gccgcccgcag 660  
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